

Environmental Management

A Periodic Update on Rocky Flats Cleanup



February/March 1994

EG&G ROCKY FLATS

FY94 Cleanup Budget Numbers are in: \$190,570,000

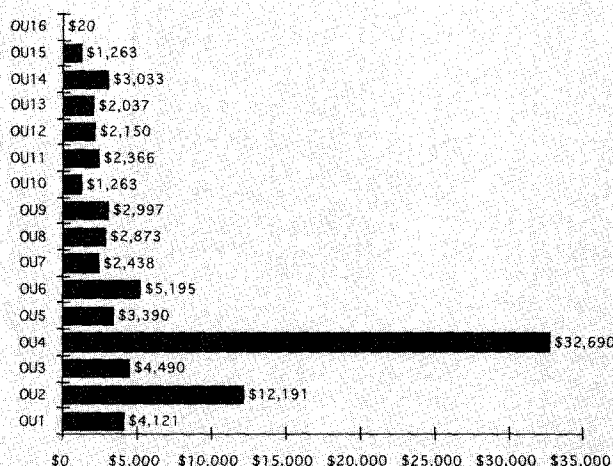
Recovery Act (RCRA) Facilities Investigations (RFIs) and project and site support. The following graphs (in \$1,000's) shows a breakdown of how

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The Environmental Restoration program at Rocky Flats has received budget authority of \$147,960,000 for cleanup activities throughout fiscal year 1994. These dollars, combined with \$42,610,000 in committed but unspent dollars from fiscal year 1993 (\$17,610,000 from committed Environmental Restoration projects and \$25,000,000 from reimbursement by the cities of Westminster and Broomfield of the unspent onsite/offsite water treatment grant), provide the \$190,570,000 needed to

complete fiscal year 1994 scheduled environmental activities.

Work that is scheduled to be completed during this time includes: Remedial Investigations (RIs), Feasibility Studies (FSs), Interim Measures/Interim Remedial Actions (IM/IRAs), Resource Conservation and



Is There Cause for Concern?

Investigation of an Eastern Boundary Well

Unfiltered water samples from an eastern boundary monitoring well may indicate plutonium and americium concentrations above stringent site-

specific standards for groundwater. Plans are currently being made to collect additional data as a precautionary measure agreed to by the U.S. Department of Energy, the U.S. Environmental Protection Agency and the Colorado Department of Health.

Operating Procedures approved by the Department of Energy, the Environmental Protection Agency and the Colorado Department of Health. The aquifer that yields significant amounts of groundwater suitable for domestic use is found at approximately 1,000 feet below this well.

"This well replaced an older well located near that area as part of the Well Abandonment and Replacement Program" explained Dr. Mary Siders, an Aqueous Geochemist within Environmental Restoration.

"The information that has been gathered thus far indicates that the concentrations reflect potential contamination from nearby soil or stream sediment that had been transported into the well at the time of its construc-

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Well Installation in Question

The groundwater quality at the Rocky Flats site is monitored quarterly in a series of wells downgradient of Rocky Flats. Samples from these wells are split with the Colorado Department of Health for independent verification of results and are publicly reported in the Rocky Flats Annual Environmental Report.

The well in question is a 17-foot-deep shallow alluvial well that was installed in 1992 following Standard

FY 94 Cleanup Budget Numbers -
Continued from page 1

this funding has been allocated:

¹Sitewide Operations: Work includes maintenance of the Buffer Zone, maintaining and tracking the Investigative Derived Material (IDM) gray drums and other support of environmental cleanup activities.

²Sitewide Programs: Work includes combining like technical projects of multiple Operable Units,

³Sitewide IM/IRA: This is more commonly known as the Industrial Area Interim Measure/

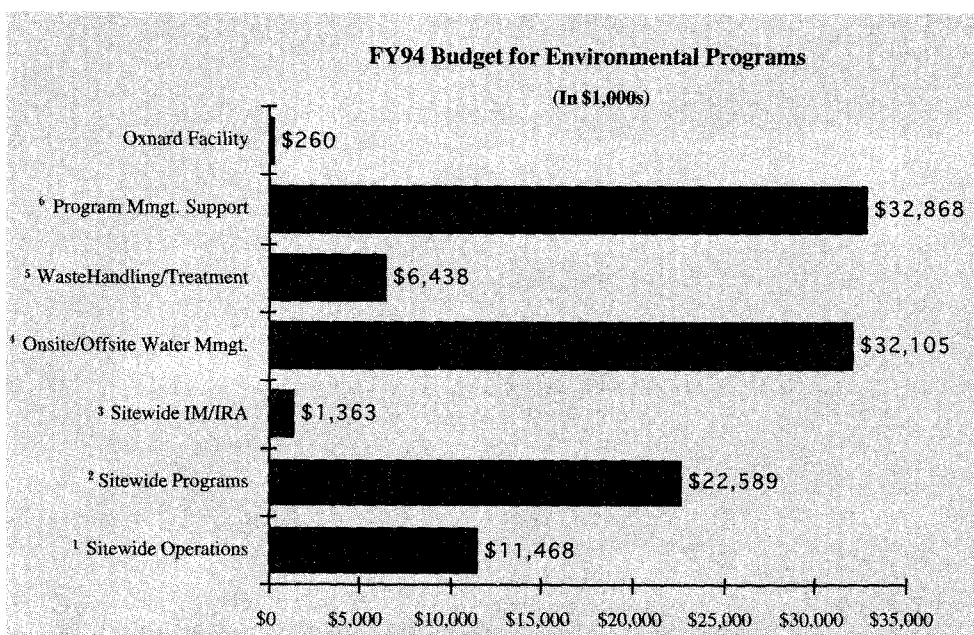
the Rocky Flats Geological Study report, the Sitewide Background study for risk assessment, the coordination and maintenance of the sample analysis program and laboratories and other projects that provide information and simplification of work required at Rocky Flats.

Interim Remedial Action. This document looks at all the issues facing remediation of the Industrial Area and the best method to approach cleanup.

⁴Onsite/Offsite Water Mgmt: This is the Option B and Option J project of providing the City of Broomfield with an additional water supply and the City of Westminster greater protection of Standley Lake.

⁵Design/Construction Facility: Work includes designing and building treatment buildings that will be utilized by multiple operable units (i.e. groundwater treatment).

⁶Program Mgmt. Support: Work includes Quality Assurance, Administrative Record support and service, Environmental Restoration Project Management and support, Community Relations activities and other programs involved in the support of managing environmental cleanup activities.



Eastern Boundary Well - Continued from page 1

tion, rather than overall groundwater quality in the area," Siders said. This particular well is located near Walnut Creek, which has a known history of contaminants in the sediments.

Rocky Flats and the Colorado Department of Health have been studying the analytical results for samples of groundwater from this monitoring well to determine the exact cause of the elevated readings.

Site Standard More Stringent

Groundwater samples collected for analysis can be unfiltered samples (water that contains sediment) and filtered samples (water that does not contain sediment). The unfiltered samples from Rocky Flats have consistently

shown readings between 0.05 and 2.2 picocuries per liter whereas samples that have been filtered consistently show readings below the stringent site-specific groundwater standards. These standards are as follows:

- Statewide groundwater standard is 15 picocuries of plutonium per liter
- Rocky Flats site-specific groundwater standard is 0.05 picocuries per liter

Re-developing the Well

Re-development (purging the well of sediments) activities have been taking place on the well and final validated results are currently pending. "The initial data suggest that re-development activities have decreased the

amount of plutonium and americium in the unfiltered samples," said Steve Singer, Groundwater Programs "This in turn supports the theory that contamination came from the surface soil or sediments."

Future Activities

Rocky Flats is looking at alternative well-drilling operations in an effort to reduce the possibility of introducing surface contamination into the well. "We are working closely with the agencies and city personnel on the best way to proceed," said Mark Levin, of Geosciences Program.

Additional groundwater monitoring wells are being considered and will be installed by utilizing new methods.

GRASS FIRE: Largest in 17 Years

Late Tuesday afternoon, March 22, 1994 will be a day that the Rocky Flats Fire Department and other local city fire departments will not soon forget. A grass fire occurred in the northeast portion of the Rocky Flats Buffer Zone located approximately three quarters of a mile west of the Indiana Street and Highway 128 intersection. The fire consumed approximately 75 acres (less than the original estimate of 160 acres) and could be seen from as many as 15 miles from the site. The probable cause: discarded materials, such as a cigarette butt.

Conditions were ripe for a fire — extended periods of unseasonable warm weather coupled with scant precipitation and dry winds had left the Buffer Zone parched.

Fire Fighters Perspective

This grass fire is the largest in the last 17 years at Rocky Flats. "The fire behaved like it was supposed to, and we fought it like we were supposed to," said Mike Smith of the Rocky Flats Fire Department, who was the operations officer in charge of coordinating the firefighting effort.

"Everything just fell into place," said John Bales, Fire Department division chief. "We had an adequate staff;

the Mutual Aid response (from outside firefighters from Cherryvale, Coal Creek, Arvada and Boulder Open Space) was quick; we had all the equipment we needed; the fire was stopped on the south by a firebreak road; and the procedures worked."

Firefighters had to chase the fire for about three-quarters of a mile before it was stopped on the south side by a firebreak road. Firebreak roads are located strategically throughout the Buffer Zone according to the Rocky Flats plan for controlling grass fires.

Good News for Ecologists



Although fires are not generally thought of as being "good", the ecologists at Rocky Flats are excited at the opportunity to study the vegetation's recovery from the burn. The burn covers an area that had been sampled last summer by the Ecology and National Environmental Protection Act

Division (NEPA) before the Surface Water Division started a weed control experiment in the area this summer. The data that had been collected now provides baseline data for much of the burned area. "We have a wildlife relative abundance survey route and a bird survey route through the burn area, as well as a relatively complete vegetation community characterization, and thus have a substantial amount of pre-fire data," said Marcia Murdock of the Ecology and NEPA Division. "We will be able to track recovery and monitor the differences between the burn and un-burned areas adjacent to the fire-break roads."




Firefighters from several agencies fought the March 22 brush fire by flanking it along the east and west edges of the fire area. (Above) Heat from the fire warped a plastic "No Trespassing" sign along Highway 128.

Important Issues Facing Firefighters at Rocky Flats


-  The boundaries of the fire did not encroach on any identified cleanup areas on the Rocky Flats site.
-  Soil sampling performed in the fire area from 1984 to 1992 shows plutonium concentrations to be a maximum of 0.024 picocuries per gram. This is:
 - Less than the average global fallout levels for this region,

which are approximately 0.04 picocuries per gram.

- Less than the Colorado Department of Health State Construction Standard of 0.9 picocuries per gram.

-  The area is not downwind from any of the historical air releases from Rocky Flats that have resulted in soil contamination. We do not expect to find, nor have

we found through sampling, any above-background radioactive contamination in the area.

-  Offsite fire department personnel and equipment were monitored for radioactive contaminants by Rocky Flats Radiological Operations personnel. No radioactive contamination was detected.

Public Invited to Use Reading Rooms

The following reading rooms contain current information, technical reports, and reference documents on environmental restoration at the Rocky Flats Plant:

Rocky Flats Plant Reading Room*

Front Range Community College Library

3645 West 112th Avenue
Level B, Center of Building
Westminster, Colorado 80030
(303) 469-4435

Hours:

Monday - Tuesday 10:30 am - 6:30 pm
Wednesday 10:30 am - 4:00 pm
Thursday - Friday 8:00 am - 4:00 pm

Citizen's Advisory Board

1536 Cole Boulevard, Suite 325
Denver West Office Park, Building 4
Golden, Colorado 80401
(303) 232-1966

Hours:

Monday - Friday 8:30 am - 5:00 pm

EPA Superfund Records Center*

999 18th Street, Suite 500
Denver, Colorado 80202-2405
(303) 293-1807

Hours:

Monday - Friday 8:00 am - 4:30 pm

Colorado Department of Health*

Hazardous Materials and Waste

Management Division

4300 Cherry Creek Drive South
Bldg. A

Denver, Colorado 80222-1530

(303) 692-3312

Hours:

Monday - Friday 8:00 am - 5:00 pm

Standley Lake Library

8485 Kipling Street
Arvada, Colorado 80005
(303) 423-4600

Hours:

Monday - Friday 10:00 am - 9:00 pm
Friday - Saturday 10:00 am - 5:00 pm
Sunday 12:00 pm - 5:00 pm

United States Department of Energy Freedom of Information and Privacy Branch Office

1000 Independence Avenue, S. W.
Washington, D.C. 20585
(202) 586-6025

Hours:

Monday - Friday 9:00 am - 4:00 pm
(Eastern Time Zone)

*Information Repository

FEEDBACK

Let us know what you think
about this Update.

Fax or mail your comments,
questions or suggestions to:

FAX: (303) 966-6153

Toni Forbes
EG&G Rocky Flats
Community Relations
P. O. Box 464
Building T130F
Golden, Colorado
80402-0464

OU16 Record of Decision Status

The public comment period for Rocky Flats Operable Unit 16: Low Priority Sites was held from November 8, 1993 through February 7, 1994. This operable unit includes seven areas at the Rocky Flats site that are considered low priority for cleanup. A remedy of "No Action" is proposed for five of the areas while two areas will be incorporated into more appropriate operable units for further investigation.

While work continues on the draft Record of Decision, the final responsiveness summary for public comments on the Proposed Plan and Draft Modification of the Colorado Hazardous Waste Permit for Rocky Flats Plant Operable Unit 16: Low

Priority Sites has been completed and reviewed by the Department of Energy, the Environmental Protection Agency and the Colorado Department of

Health. The Final Responsiveness Summary and the Record of Decision will be issued as one document.

The tentative schedule for Operable Unit 16 is as follows:

- April 29, 1994 Draft Record of Decision and Final Responsiveness Summary to Colorado Department of Health and Environmental Protection Agency for review (3 days ahead of schedule)
- July, 1994 Record of Decision finalized
- July, 1994 Record of Decision signed

SPRING CLEANING STARTS IN SOLAR PONDS

Vacuuming of Ponds Begins February 7, 1994

The first gallons of sludge were sucked out of the B-South Solar Pond on February 7, 1994 as the "first step in our program leading to remediation and final closure of the ponds under Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) regulations," said Steve Keith, director of the Solar Ponds Project. "Currently we are determining how we will propose to close the ponds through joint working sessions with the

Department of Energy, the Environmental Protection Agency and the Colorado Department of Health."

Approvals to begin work on the project were granted by the Colorado Department of Health on January 31, 1994 and by the Department of Energy-Rocky Flats Field Office on February 3, 1994 under the guidelines of waste management.

Vacuum Trucks Remove Sludge

The process for removal is literally sucking the sludge from the pond using a vacuum truck. The sludge is then transported and placed in 10,000-gal-

lon polyethylene tanks for temporary onsite storage. A total of seventy tanks are located in tents at a permitted storage area known as the 750 Pad.

Sludge will be stored in these tanks "until a final treatment of the material can be developed," explained Joe Mellen, program manager for the Accelerated Sludge Removal Program. "Before that can be done, we have to know what the acceptance criteria for hazardous wastes will be."

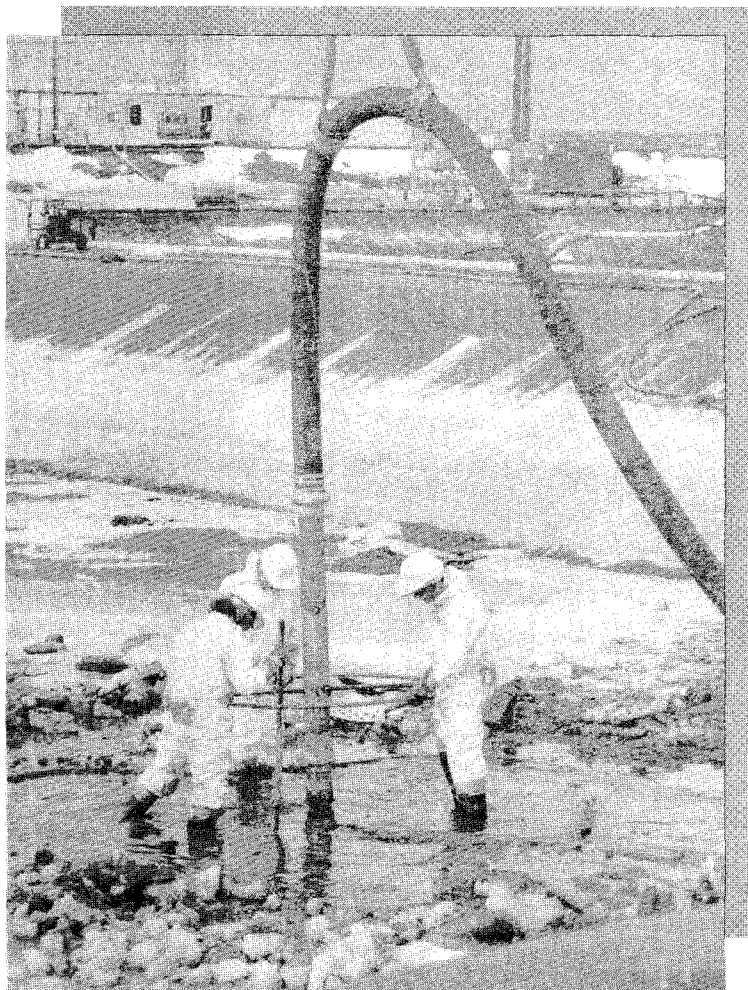
To date, four ponds, or approximately 80 percent of the total pond area, are empty so that clean-up investigations can proceed in these areas.

Sludge Removal No Small Task

The B-South Pond contained approximately 200,000 gallons of sludge. It was estimated that this sludge removal would take 20-25 full days and as many as 200 vacuum truckloads. However, weather factors affected progress as work must be stopped when temperatures fall below freezing or when the wind speed exceeds 25 mph. The sludge removal process for B-South Pond was completed the week of May 9, 1994 and filled 27 of the 70 storage tanks.

Now that B-South Pond is emptied, work has begun on emptying C-Pond which holds more than 500,000 gallons of sludge.

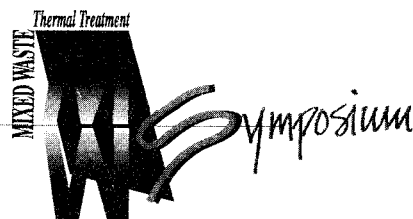
Final removal of all sludges is scheduled to be completed by the January 20, 1995, Interagency Agreement milestone.



Work began February 7 on the vacuuming of sludge out of B-South Pond. The sludge is literally sucked through a huge hose and deposited into a tanker before being transferred to storage tanks at the 750 pad. Above, chemical operators break up ice and attempt to position the vacuum to keep the flow of sludge steady.

Environmental Management

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The U.S. Department of Energy and EG&G Rocky Flats recently hosted a symposium for a Mixed-Waste Thermal Treatment held April 12-14, 1994 in Denver, Colorado. Although a combination of several technologies, both thermal and non-thermal, will be necessary to clean-up Rocky Flats and other sites throughout the Department of Energy Complex, this particular symposium focused on the thermal treatment options and a wide variety of national research efforts currently taking place.

No Decisions Yet

Since no decisions have yet been made on which treatment technologies will be used, the symposium provided a means for the public, researchers, political officials and concerned interest groups to learn more about national mixed waste (a combination of chemically hazardous and radioactive waste) issues and the proposed treatment technologies. It is also an opportunity for those in technology development

and in the decision-making process to get feedback from interested stakeholders.

Focusing on Options

The first two days of the symposium focused on thermal treatment options for site remediation with keynote speakers Dr. Ed Martin of Hazardous Materials Controls Research Institute and Nathaniel Miullo representing the Environmental Protection Agency-Region VIII. Both speakers provided information, experiences and perspectives in the areas of incineration and the thermal treatment of mixed waste.

An Involved Public

A round-table discussion on public involvement in the decision-making process brought the second day of the symposium to a close. Panel members included representatives from the Rocky Flats Cleanup Commission, Rocky Mountain Arsenal, Environmental Information Network, Department of Energy Headquarters and several Department of Energy sites including Rocky Flats, Savannah River and Hanford.

The final day featured a tour of some of the research facilities operated by the Technology Development organization at Rocky Flats.

For More Information

For more information regarding the Mixed Waste Thermal Treatment Symposium or any of the technologies, please contact:

Carla Sanda
EG&G Community Relations
P.O. Box 464, T130F
Golden, CO 80402-0464
(303) 966-2011

Other topics, speakers and technologies featured at the symposium included:

- Rotary Kiln Incineration
- Controlled Air Incineration
- Plasma Arc
- Rotary Reactor Incineration
- Vitrification
- Molten Salt Oxidation
- Fluidized Bed Unit
- Microwave Solidification
- Ash Stabilization
- Coalition for Responsible Waste Incineration
- Combustion By-Products
- Off-Gas Technology
- Rocky Mountain Arsenal's Submerged Quench Incinerator
- DOE's Mixed Waste Treatment Programs

UPCOMING PUBLIC MEETINGS

- | | |
|------------------|--|
| August 10 | Site Wide Environmental Impact Statement Scoping Hearing - Contact: Toni Forbes, 966-6616
1:00 p.m. - 4:30 p.m. and 6:00 p.m. - 9:00 p.m.
Arvada Center for the Arts and Humanities, 6901 Wadsworth Blvd., Arvada |
| August 17 | Rocky Flats Monthly Public Meeting - Contact: Dennis Connors, 966-8164
7:00 p.m. - 9:00 p.m., Denver Marriott West, 1717 Denver Marriott West Blvd., Golden (location tentative)
Topics: Strategic Plan Comments |
| August 24 | Programmatic Environmental Impact Statement Public Information Meeting (Tentative)
Contact: Todd Wollard, 966-6232
Time: TBD, Location: TBD
Topics: Disposition, Storage, and Non-proliferation of fissile material |
| August 30 | Environmental Exchange of Information Meeting - Contact: Kathryn Madore, 966-3844
1:30 p.m.
Broomfield City Council Chamber, No. 6 Garden Office Center, Broomfield |

We Need Your Help!

We are in the process of reviewing the Rocky Flats Community Relations Plan and would like to ask you for your assistance. This document describes the mechanisms through which Rocky Flats will inform and involve the public in environmental restoration and related environmental activities at the site. It is to be reviewed at least every two years and updated as necessary to meet the changing needs of the community.

To help accomplish the review of the existing Community Relations Plan, we have included the following questionnaire and would appreciate your comments. Please return your comments to:

*Toni Forbes, , EG&G Rocky Flats
P.O. Box 464, T130F
Golden, Colorado 80402-0464
Work: (303) 966-6616
Fax: (303) 966-6153*

1. What are the Rocky Flats cleanup issues most important to you?
2. Do you need more information about the site? If so, what type of information do you need?
3. Have you found it difficult to obtain information about Rocky Flats? Please explain.
4. What has been the best method of providing you with information about environmental cleanup activities and related issues?
5. Is there a method of providing you with information about environmental cleanup that we are not using? Please explain.
6. How can we better involve you and encourage participation in cleanup activities at Rocky Flats?



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